

WHAT IS CLAIMED IS:

1. A cylinder injecting fuel injection valve device to be mounted to a cylinder head of a cylinder injection type internal combustion engine, comprising:

a fuel injection valve arranged with its forward end side portion with a fuel injection port inserted into a fuel injection valve insertion hole formed in the cylinder head, the fuel injection valve including an axially constrained portion formed in an outer periphery of a metal portion formed on a body portion so as to protrude radially outwards and a radially constrained portion of a predetermined configuration formed on an outer peripheral surface of a resin portion provided on a rear end side with respect to the axially constrained portion, the fuel injection valve being adapted to inject fuel directly into a cylinder from the fuel injection port; and

a retainer one end of which is fixed to the cylinder head and the other end of which has a constraining portion by means of which the fuel injection valve is secured in position,

wherein the constraining portion of the retainer abuts the axially constrained portion to axially pressurize the fuel injection valve toward a cylinder head side, and is engaged with the radially constrained portion to thereby restrict rotation of the fuel injection valve around an axis.

2. A cylinder injecting fuel injection valve device according to Claim 1, wherein the axially constrained portion of the fuel injection valve is a flange provided around an entire circumference of an outer peripheral portion of a metal housing accommodating a coil and a valve body.

3. A cylinder injecting fuel injection valve device according to Claim 1, wherein the radially constrained portion of the fuel injection valve is a flat surface formed on an outer peripheral surface of a resin housing molded integrally with an external plug connector.

4. A cylinder injecting fuel injection valve device according to Claim 1, wherein the retainer is formed of an elastic material, and is fastened to the cylinder head by means of a bolt passed through a through-hole formed in an intermediate portion of the retainer.

5. A cylinder injecting fuel injection valve device according to Claim 4, wherein the flat surface formed on the outer peripheral surface of the resin housing of the fuel injection valve comprises two surfaces parallel to a plane including a central axis of the fuel injection valve and a central axis of the bolt.

6. A cylinder injecting fuel injection valve device according

to Claim 4, wherein the flat surface formed on the outer peripheral surface of the resin housing of the fuel injection valve comprises a flat surface perpendicular to a plane including a central axis of the fuel injection valve and a central axis of the bolt.

7. A cylinder injecting fuel injection valve device according to Claim 4, wherein a plurality of the fuel injection valves are mounted to the cylinder head, with a central axis of each fuel injection valve and a central axis of each bolt being in the same plane.